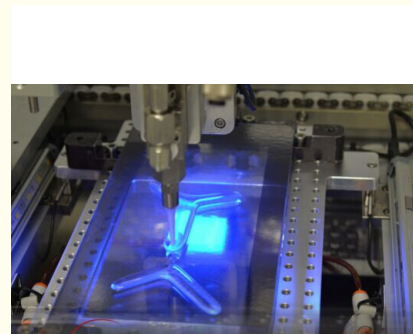




Environmentally Friendly UV Adhesive Resin Excellent Bonding Performance

Basic Information

- Place of Origin: Wuhan, Hubei, China
- Brand Name: Meilun Materials
- Model Number: SNK
- Minimum Order Quantity: 20kg
- Packaging Details: 20kg/barrel, 200kg/barrel
- Supply Ability: 50T/month



Product Specification

- Highlight: UV Adhesive Resin, polyurethane acrylate, UV high temperature resistant resin



Product Description

UV Adhesive Resins: Advanced Materials for Efficient Curing and Multifunctional Applications

UV adhesive resins are high-molecular-weight materials that rapidly cure upon exposure to ultraviolet (UV) light. With advantages such as high efficiency, environmental friendliness, and tunable performance, they are widely used in the electronics, optics, automotive, medical, and packaging industries. Their core components typically include acrylate-based prepolymers, reactive diluents, and photoinitiators. Among these, aliphatic polyurethane acrylate and polyurethane acrylate are two key high-performance resins that endow the material with excellent comprehensive properties.

1. Core Resin Types and Characteristics

1.1 Aliphatic Polyurethane Acrylate

This resin is based on an aliphatic polyurethane backbone modified with acrylate functional groups. The aliphatic chain segments in its molecular structure provide the resin with excellent resistance to yellowing, flexibility, and weatherability, making it well suited for outdoor environments or applications with prolonged light exposure. In addition, this type of resin exhibits good compatibility with various substrates—such as glass, metal, and plastic—making it a typical representative of UV resins with outstanding adhesion performance.

1.2 Polyurethane Acrylate (PUA)

Combining the high elasticity of polyurethane with the rapid curing characteristics of acrylate, polyurethane acrylate (PUA) features high abrasion resistance, impact resistance, and adjustable hardness. It is widely used for bonding precision electronic components and providing protective coatings. By adjusting the structure of the polyurethane chain segments, its chemical resistance and mechanical strength can be further optimized.

2. Key Performance Advantages

UV Rapid Curing Resin:

Under UV light exposure, these resins can cure within seconds, significantly boosting production efficiency. This rapid curing is especially advantageous for high-speed automated production lines.

UV High Temperature Resistant Resin:

By incorporating heat-resistant monomers (such as Bisphenol A-type epoxy acrylate) or inorganic fillers, some UV resins can operate stably in environments above 150°C for extended periods. This makes them ideal for high-temperature applications such as automotive engine components and LED packaging.

Excellent Adhesion Performance:

Through careful molecular structure design and surface energy modulation, UV resins can achieve high-strength bonding on difficult-to-bond substrates (such as PP and PET) while reducing the need for extensive substrate pretreatment.

3. Expansion of Application Scenarios

Electronics:

Utilized for chip bonding and touch screen lamination where high precision and low thermal stress are essential.

Medical Devices:

Biocompatible UV resins are used for bonding catheters and encapsulating disposable medical instruments.

Optical Devices:

Low-shrinkage, high-transmittance resins are employed in lens assembly and optical fiber coating.

Industrial Manufacturing:

High temperature resistant UV resins are applied in engine sealing and bonding aerospace composite materials.

4. Future Development Trends

With increasingly stringent environmental regulations and more refined end-use applications, UV adhesive resins are evolving toward solvent-free formulations, the substitution of bio-based raw materials, and multifunctional integration (such as incorporating conductive or thermally conductive properties). Additionally, the development of novel photoinitiator systems that balance rapid curing with deep cure, as well as enhancing the durability of aliphatic polyurethane acrylate in extreme environments, will be key focal points for future technological breakthroughs.

Conclusion:

With their rapid curing, tunable performance, and environmentally friendly characteristics, UV adhesive resins have become indispensable materials for bonding and encapsulation in modern industry. Innovative resin systems, such as those based on aliphatic polyurethane acrylate, are continuously driving the field toward higher performance and broader application scenarios.

Recommended product models(please search on the site):

SNK-8235,SNK-8204D,SNK-2242,SNK-8206C

Storage and validity period:

- 1: This product should be stored in a cool, well-ventilated room, and strictly protected from light exposure for stable storage.
- 2: Keep the resin away from heat sources and store it in a dark place to prevent potential hazards or affecting the stability of resin storage.
- 3: When stored at room temperature, it remains stable for six months. After use, please tightly seal the container to avoid exposure to light sources and gelation.

Package

- 200 kilograms/iron drum
- 20 kilograms/iron drum
- 200 kilograms/plastic drum
- 20 kilograms/plastic drum





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